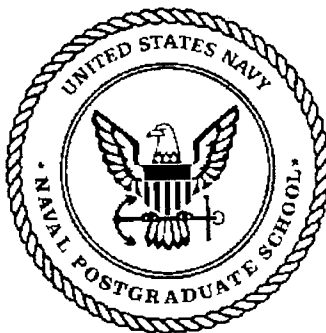


NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA



THESIS

AN EVALUATION OF DIRECT CASH COMPENSATION IN LIEU OF MILITARY COMMISSARY PRIVILEGES

by

Martin Alcott

December 1994

Principal Advisor:

Joseph G. San Miguel

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COMPENSATION IN LIEU OF MILITARY
COMMISSARY PRIVILEGES

by

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Lieutenant Commander, Supply Corps, United States Navy
B.S., The Citadel, 1980

Submitted in partial fulfillment
of the requirements for the degree of

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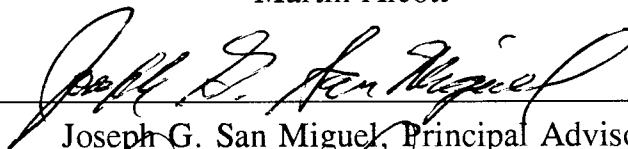
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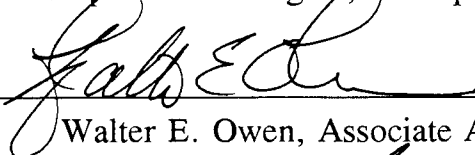


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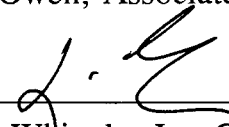
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ABSTRACT

Due to a shifting national focus aimed at reducing Department of Defense force levels and weapons procurement, no program is safe from budget cutting scrutiny. The reduction has affected all areas of Defense and has become known as "downsizing." The privatization methods introduced during the 1980's should continue to serve the military by better utilizing future shrinking Defense budgets.

The purpose of this thesis is to evaluate the privatization alternative of direct cash payments in lieu of commissary privileges. A cost comparison was conducted in order to determine the feasibility of direct cash payments. It compares active duty estimated commissary savings to commissary appropriated fund support.

The data presented supports the conclusion that direct cash payments are more efficient than commissary privileges. By eliminating the Continental United States portion of government subsidies, over \$130 million could be saved annually.

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I. INTRODUCTION

A. OVERVIEW

The purpose of this thesis is to analyze the privatization alternative of direct cash payments in lieu of commissary privileges. Due to a shifting national focus aimed at reducing Department of Defense (DOD) force levels including weapons procurement, no program is safe from budget cutting scrutiny. The reduction has affected all areas of Defense and has become known as "downsizing." The privatization methods introduced during the 1980's might continue to serve the military by better utilizing future shrinking Defense budgets.

During the 1980's, the Reagan Administration introduced initiatives to reduce the expanse of the Federal Government. Government operations that could be performed by the private sector were considered as candidates for divestiture. The private sector was invited to challenge government activities by submitting competitive bids for government work. This form of privatization challenged every area of government including the commissary system.

The military commissary system emerged from World War II as a highly competitive national grocery chain. Prior to the 1990's, it was ranked as one of the top five grocery chains based on annual gross sales. However, during the early 1990's its sales growth began to diminish in relation to the rest of the grocery industry. In 1993, it was only ranked as seventh among national grocery chains. Despite this reduction in annual sales growth, it has continued to rival all major grocery chains within the private sector.

Until 1990, excluding some minor attacks from few congressional privatization advocates, the commissary system faced only the private sector as its major adversary. However, after 1990, the commissary system began to face new challenges. The crumbling of the Berlin Wall not only brought

an end to the Cold War but also ended a period of expanding Defense budgets. As national entitlements have continued to grow, many citizens have urged Congress to allocate more funding to domestic spending than to defense. A national vigor has emerged to find new alternatives to reduce Defense operations. This new vigor was similar to the Reagan Administration's attempt toward reducing overall government, but is now only focused on Defense.

B. PRIVATIZATION METHODS

Over many economic cycles, it has become common for commercial profit-oriented organizations to employ various means of cost reduction in order to maintain profit margins during economic downturns or recessions. In the past, organizations would simply reduce general overhead expenses in order to control overall costs and maintain existing profit levels. Slashing general overhead expenses was a traditional means of cutting costs without reducing production capacity. This last economic downturn saw a new twist to this cost cutting approach through increased use of "outsourcing."

Outsourcing simply involves the review of internal operations or functions to determine if there are any operations that can be performed more efficiently by an outside company. One area that makes outsourcing different from past cost cutting methods is that it is not confined to general administrative areas. The current movement involves reviewing all functional areas, including production, to determine which goods and services should continue to be provided from in-house efforts and which should be procured from outside sources. All work outputs from administrative processes, facility maintenance and various subcomponent production are all tested for in-house efficiency through comparison to outside sources. Within the private sector outsourcing is acknowledged to be an effective means of

reducing costs. The public sector's equivalent to outsourcing is "privatization."

The term "privatization" represents any government act that introduces market forces to better utilize resources. Specifically, it can be applied to any transfer of government produced goods and services from the public sector to the private sector. [Ref. 1] Privatization advocates contend that the most efficient production of government goods and services occurs through the free market system. There exists numerous studies to support this claim. Economic theory has documented the inefficiencies that are inherent with government free market interventions. Adding to government inefficiency is the weak owner-agent relationship that is associated with government employees. [Ref. 2]

Privatization initiatives can be administered through various methods. Simple government acts such as deregulation and the implementation of user fees are considered privatization acts since they increase competition within the free market. Deregulation is a privatization initiative that allows prices to be set through the normal interaction of supply and demand forces. User fees reduce government subsidies and the free-rider condition by requiring benefactors to remit full or partial payment for government supplied goods or services. Other forms of privatization include sale of assets, contracting out, and the use of vouchers. Within the realm of privatization there exists many hybrid forms that incorporate partial use of one or more of these main forms. [Ref. 3]

The following privatization methods can be applied to military commissaries: user fees, contracting out, and vouchers or direct provisioning. User fees are already being applied in the form of surcharges and are currently five percent of each customer's total purchase. During the 1980's, both the Privatization Task Force of the President's Private

Sector Survey on Cost Control (the Grace Commission) and the President's Commission on Privatization recommended the contracting out of commissary operations in the Continental United States (CONUS) [Ref. 4]. Only CONUS operations were recommended since it was felt that domestic grocery companies would either be incapable or unwilling to operate at foreign military locations.

By 1989, the contracting out of commissary operations had been strongly opposed by the Department of Defense (DOD). Congress supported DOD on this point although it was still clearly intent on reducing appropriated funds to support commissaries. The third option of providing commissary benefits through direct provisioning had yet to receive much attention.

C. ANOTHER POSSIBLE ALTERNATIVE

During the 1980's there was an effort from the commercial grocery industry to induce Congress to restrict commissary operations in CONUS. The grocery industry wanted Congress to either contract out management of the retail stores or restrict patronage to only active duty military personnel. In response to these privatization challenges, the Fiscal Year 1989 National Defense Authorization Act contained a prohibition against privatization, in particular, the contracting out of military commissaries.

Those early privatization challenges along with dwindling budgetary resources led to an independent DOD study of the commissary system. This study became known as the Jones Commission. It was intended to improve the commissary system by providing the most efficient organization while reducing its dependence on appropriated funds. Since the contracting out option had been prohibited by the Authorization Act, the only remaining privatization method was direct provisioning or direct cash compensation.

The Jones Commission made numerous recommendations for cost savings and customer service improvement. It also concluded that direct cash compensation in lieu of commissary privileges was a more costly alternative. The study estimated that the benefit provided an average annual savings of \$1,218 per service member. It estimated aggregate savings for CONUS married members to be \$884.85 million ($\$1,218 \times 726,476$). This greatly exceeded the Fiscal Year 1988 CONUS portion of commissary appropriated funds of \$477.5 million. The Commission contended that based on the military's married population alone direct cash payments appeared to be prohibitive. [Ref. 5]

In 1994, the DOD's Office of Program Analysis and Evaluation indicated that the active duty customer's average annual savings was less than \$500. Today the government contributes about \$1.1 billion per year to run the commissary system. This lower savings estimate when multiplied by a planned drawdown total force strength of approximately 1.4 million members (approximately 2/3 of the 1988 force) produces a much lower active duty benefit value comparison of \$700 million. Based on these lower figures the direct cash compensation option appears to be a possible cost saving alternative. [Ref. 6] [Ref. 7]

The profile of commissary beneficiaries has changed over the last twenty years and will continue to change over the next decade. This changing situation may suddenly make direct compensation a more efficient means of providing this benefit. Major factors that may possibly contribute to this situation include: shrinking family sizes, a smaller retiree population, and a much reduced active force [Ref. 8].

In addition, there will be less commissary support due to system consolidation and the negative disruption caused by the closing of facilities as a result of the Base Realignment and Closure (BRAC) process. With direct cash compensation active

duty beneficiaries will retain the same income benefit but will have the choice of shopping at larger, more convenient, newer superstores within the local community. The direct cash compensation method would provide equal universal provisioning of the benefit which does not occur under the present system. Also, it may enhance the recognition of this benefit by making it easier to measure.

D. AREA OF RESEARCH

This thesis will investigate the possible privatization of the commissary system focusing on direct cash compensation in lieu of commissary privileges. It will review the nature of the commissary benefit including its history, intended purpose, and some understanding of its current beneficiaries. This research will attempt to identify any cost savings that have been identified from past studies. A cost comparison will be provided to determine if cash compensation in lieu of the commissary privilege is feasible.

The analysis will be limited to only CONUS commissaries. The reason for this limitation is due to the availability of data and the researcher's lack of experience with the remoteness of various overseas locations and negative aspects this alternative might present. Time and financial resources limit a more comprehensive study to this subject.

During this study the following research questions will be answered:

1. What is the history of the commissary benefit and its intended purpose?
2. Do commissary beneficiaries have a legal right to these benefits?
3. What is the value of the commissary benefit?
4. Can this benefit be provided more efficiently through direct cash compensation or other means?

E. METHODOLOGY

The first step of the research was to identify a topic area. A dialectical approach was taken after studying various Defense privatization initiatives. The initiatives centered around various support functions including the major funding areas of personnel, logistics and maintenance support. Within the realm of personnel support the two significant areas for considering current privatization were housing and commissary support. Thus, commissary support was selected as a research topic.

It was conjectured that perhaps one of the various privatization methods could be utilized to provide commissary benefits in a more cost-effective manner. This led to the isolation of the objective research question pertaining to direct cash compensation in lieu of commissary privileges.

The research was primarily performed in an inductive mode employing two research strategies. The primary strategy consisted of a archival review that concentrated on both primary and secondary domains. The formal technique of content analysis was used to retrieve data from these sources. An opinion strategy was used to a much lesser extent and was limited to gathering non-statistical data on beneficiary sentiments towards this thesis. The domain consisted of individuals and the technique used for data collection was informal personal interview. These two strategies presented sufficient data to infer reasonable conclusions and recommendations.

F. THESIS ORGANIZATION

This thesis is organized into five chapters. This chapter provided some introductory information in order to identify the research problem, its limitations, and the scope and objective for the thesis. Chapter II explores the background of the commissary system including its history and

intended purpose. It also describes post World War II developments that have challenged the commissary system. It also provides a discussion of past studies and their attempts toward improving the efficiency of the commissary system. Finally, Chapter II identifies present and possible future issues that may lead to continued change in the commissary system.

Chapter III identifies all the data sources used for this thesis and the means used to collect the data. It also introduces the methodology used to measure the value of the commissary benefit and the process used to make program cost comparisons.

Chapter IV presents and analyzes the data. It provides a discussion on the legal right to commissary benefits. It also provides benefit value comparisons in order to determine the feasibility of the direct cash compensation alternative.

Chapter V provides an overall summary and conclusions. It also offers recommendations and suggestions for further research so that other researchers might seek additional information.

II. BACKGROUND

A. OVERVIEW

This chapter provides background information on the commissary system. The purpose of this information is to illustrate the evolutionary process of this system and to identify its intended purpose. The commissary system as referred to in this section and throughout the remainder of this thesis will refer only to the grocery store system and its supporting infrastructure. This thesis will not provide a complete chronological review on all the issues involved with the feeding of troops. Instead, it will provide only a simplified historical overview with emphasize on key events as they pertain to the commissary system. More specific details on military subsistence (feeding of troops) can be found in the referenced material. The commissary privilege was originally considered a compensatory fringe benefit. Thus, some military compensation history is interspersed throughout this chapter. Highlights from past studies are examined in order to demonstrate the visibility of this benefit as a periodic budget-cutting target. It will also present past attempts toward improving system efficiency. Finally, some present-day issues are introduced to demonstrate future budgetary issues that may continue to challenge the commissary system.

B. HISTORY

The existence of commissaries in the military date back to 1867. They originated when military installations were located in the frontier wilderness. Military members have since viewed the benefit as an "implied contract." The earliest reference to the service is an Appropriation Act of 1866. This act authorized the Subsistence Department of the Army to sell articles at cost prices to both officer and enlisted personnel starting 1 July 1867. [Ref. 9]

Ever since armed forces were first assembled, governments around the world have historically found it necessary to house, feed and provide essential services in order to develop and maintain an effective fighting force. For centuries governments have furnished subsistence to members of its armed forces either directly or indirectly. The requirement to provide subsistence to military forces is an item that has never been questioned. However, the method of provision has always been a major logistical concern for many military leaders. [Ref. 10]

In July 1775, General Washington requested Congress to appoint the first Commissary General of the Army [Ref. 11]. This event has led much of the literature to suggest that the commissary system started during the Revolutionary War. In reality, this was the start of the Army's troop subsistence system [Ref. 12]. The retail commissary system with its commercial type grocery stores grew from the Army's subsistence system. Today's commissary command, the Defense Commissary Agency (DECA), even traces its heritage back to the creation of the Commissary General's Office. However, the agency admits that the Commissary General was not involved in the sale of foodstuffs. [Ref. 13]

The confusion associated with commissary establishment dates is due to the Army's early commissary system performing only a subsistence function. Due to evolutionary changes during the late 1700's and throughout most of the 1800's, the grocery store operation emerged from the subsistence system as another means of provisioning food stores to feed the troops. The commissary retail system started with the Army and then later spread to the other services. The purchase of subsistence items directly from the subsistence department was at first a privilege reserved for the officer corps and then later extended to enlisted personnel.

The daily "ration" or portion of subsistence has always been approved by congressional act and has always been measured in monetary terms to facilitate the budgetary process [Ref. 14]. Since it has to be increased by congressional act, rations have never kept pace with the times. Sometimes in the past they were purposely not increased due to budgetary constraints. This meant that the existing real value of rations would be reduced by inflation. This became an inherent problem throughout U.S. history.

Soldiers drew a physical ration as measured by its monetary equivalency. The first rations that were authorized by congress to be drawn by the revolutionary soldier were as follows:

Beef, pork or fish	4.5 cents
Bread or flour	1.0 cent
Peas and beans	1.0 cent
Milk	1.0 cent
Beer	1.0 cent

This system exists even today. Military personnel drawing government rations are fed at a daily monetary subsistence rate which is intended to provide one person with three meals per day. [Ref. 15]

With the inception of the Continental Army in 1775 until the early 1900's it has been difficult for the U.S. Government to provide full authorized rations for its soldiers. Prices in 1780 were twenty times that of 1774. Foodstuffs were scarce and when available were very expensive. Often, troops had to fend for themselves by using their basic pay to purchase food from traveling peddlers or by depending on food donations from nearby communities. Rampant inflation caused by too much Continental Currency led to profiteering by the peddlers. Soldiers usually went hungry which seriously impacted morale and readiness. This caused the Army to seek a remedy. [Ref. 16]

Because ration items were frequently out of stock, Army policy was changed to allow cash payments for unavailable items in the basic ration. This monetary exchange or commutation of rations was not by the member's choice and was based solely on existing inventories. Members were now guaranteed the value of their authorized ration even if physical inventories were not immediately available. This change also meant that members no longer had to use their base pay to purchase rations. [Ref. 17]

The troops often preferred commuted rations over physical or "in-kind" rations because it allowed members the basic freedom of choice. For example, if members did not want their beer ration they could convert the commuted monetary portion to buy more meat. Without commuted rations members were left to informally barter away their individual undesired ration portions for more desperately needed items. Even today most service members prefer cash allowances to in-kind compensation. [Ref. 18]

Officers of the time received monetary rations according to grade in multiples of a standard ration varying from two rations for the lowest grades to fifteen for general officers [Ref. 19]. However, as the Army started to expand westward into extreme remote areas, there were fewer traders to provide supplemental ration support. In 1826, in order to remedy this situation Congress authorized the sale of government food and other items at cost to officers stationed at locations remote from markets where groceries could not be purchased at reasonable prices [Ref. 20].

In 1835, there were 100 military posts with Fort Leavenworth, Kansas being the westernmost post. Of the 100 military posts only 21 were on the frontier and considered truly remote. In 1841, Army policy was changed again so that officers could purchase provisions from the subsistence system for themselves and their families. Since there were no limits

on the amount that could be purchased most officers were already making purchases for their families. This change in the regulations simply formalized an already existing practice. Enlisted personnel were still required to draw in-kind rations. [Ref. 21]

The variety of items stocked by the subsistence system increased dramatically. This was due directly to the officers privilege to purchase directly from the Subsistence Department. During the Civil War years stock range and levels continued to grow due to purposely ignored or liberally interpreted regulations. However, similar to previous wars, various ration items did experience some short supply. Rather than permit overall inventory levels to become critical, the subsistence system allowed vendors to make substitutions for unavailable ration items, i.e. hams could be substituted for bacon. Eventually both replacement and original ration items were being stocked. [Ref. 22]

A year after the Civil War ended Congress authorized enlisted men the same subsistence privileges enjoyed by officers, but only at remote posts. More troops were needed at frontier posts in order to provide protection to the increasing number of settlers. It was hoped that subsistence privileges would help attract sufficient numbers of enlisted men to these remote western posts [Ref. 23]. In 1866, the War Department issued a general order to the Subsistence Department to sell articles of subsistence to military members at remote locations. A location was considered remote if it was inaccessible to local markets and groceries could not be purchased at reasonable prices.

In 1867, the Army started establishing commissary retail (grocery) stores, which were similar to general stores of the period. The early stores had limited operating hours and their range of inventory was between 200-300 items [Ref. 24]. "Remote from markets" and "inability to

purchase groceries at reasonable prices" were given liberal interpretations. These "liberal interpretations" led to the first commissary retail store to be built at Fort Delaware, Delaware City, Delaware - far away from the frontier. [Ref. 25]

The Army continued to add to its commissary system throughout the remainder of the 19th century. However, it was during the first half of the 20th century that commissary stores began to open for the other military services. The Marine Corps opened its first store in 1909. The Navy followed the next year with its first store opening at the Washington Naval Shipyard, Washington, D.C. [Ref. 26]. During the mobilization for World Wars I and II commissary stores grew in consonance with the construction of new military installations. In 1943, dependents were allowed shopping privileges when their sponsors were away at war. These privileges were continued after the war and in 1945 the range of stocked items was expanded to include perishable subsistence. Prior to this, the stores only carried dry and canned goods. By the end of World War II, the military commissary system was well on its way to becoming a major grocery chain. [Ref. 27]

C. POST WORLD WAR II DEVELOPMENTS

Commissary benefits are unlike other pay elements in that they began as a privilege, were adopted as a means of operational support, and then later became institutionalized as an income benefit. The history of the commissary system demonstrates how privileges can become institutionalized for members of the military service. In fact, today many of the benefits and privileges received on active duty are carried as entitlements into retirement. [Ref. 28]

Changes to the military pay system can occur only through congressional act. This has led to the institutionalism of

military pay elements. Specifically, items of pay established as temporary measures many times became permanent. Since the Revolutionary War until the present, military pay would remain static until either its procedures or levels became obviously inadequate. Although there were incremental pay changes between war periods most of the major revisions to the military pay system occurred following major wars. It was during these times that new pay concepts would be developed in order to provide a system that would be more contemporary.

Following World War II this practice of conducting major military pay reviews was embodied in the Career Compensation Act of 1949. This act was similar to previous postwar inflationary remedies and produced the same military pay and allowance system that is still in use today [Ref. 29]. One of the by-products of this legislation was that it also required the Department of Defense (DOD) to draft regulations regarding establishment criteria for commissary stores. The intent of this criteria was to establish justification for future stores. It was also developed to ensure that the system's growth would remain in check and not expand and compete with commercial facilities.

The Armed Services Commissary Regulations submitted to the House Subcommittee of the House Committee on Armed Services in 1949 indicated that commissary stores would not be authorized in areas with adequate commercial facilities. [Ref. 30] These Regulations, drafted by DOD, were based on convenience, price and adequacy as follows:

1. Convenience - based on nonexistence of a commercial store within ten miles of a military installation.
2. Price - unreasonableness existed when commercial prices were twenty percent higher than commissary store prices.

3. Adequacy - based on commercial store inventories being insufficient as compared to those items carried in commissary stores.

The adequacy standard mainly applied to overseas locations.
[Ref. 31]

The new commissary regulations were never used to eliminate justification for existing commissaries but were mainly used to justify the establishment of new stores. Congress, however, seemed determined to reduce commissary appropriation support and intended to reemphasize its commitment. In 1952, Congress decided to make commissaries more self-sufficient by passing on certain operating costs to its customers through the use of a surcharge. A surcharge had not been imposed on the commissary system since a 10% surcharge was enacted in 1879. It was designed to defray the increase in system costs for spoilage, transportation and other incidentals. In 1884 the surcharge was repealed because improved rail support eliminated its need. [Ref. 32]
[Ref. 33]

The surcharges imposed in 1952 were intended to cover costs in purchasing and maintaining operational equipment and supplies, second transportation of goods, and to pay for utilities in CONUS. Secondary transportation of goods deals with the movement of inventory from a central warehouse to ultimate store locations. Surcharge rates were applied to total customer purchases and ranged from 1%-2% depending on individual service commissary system. The rationale for surcharges was that the 1949 Compensation Act had restored military pay to a comparable civilian compensation standard and that any further income effect was not necessary. Also, it was believed that savings from closed commissary stores could produce an offset to help finance the new pay and allowance system. [Ref. 34]

An additional requirement was imposed the following year

when Congress required annual justification certification for existing commissary stores. By 1953, the number of commissaries established in CONUS by the four services had grown to 210 stores. To continue operating commissaries in CONUS the Secretary of Defense was required by law to certify the requirement for existing commissaries and was directed to close those stores that no longer met the justification criteria. Many in Congress felt that justification for continued commissary support was questionable since most military installations were located near large metropolitan areas. [Ref. 35]

By the 1960's, the value of commissaries became a key issue for sustaining recruitment, retention and overall personnel readiness goals. Prior to 1967, the military considered the commissary fringe benefit as a factor in determining pay raises. In 1967, the First Quadrennial Review of Military Compensation (QRMC) recognized the benefit as no longer an appropriate element of compensation because it provided unequal benefits to military personnel. It was also considered an impractical obligation on the part of the Government to guarantee commissary benefits. The QRMC stated that the value of the benefit depended on family size, income level, access to commissaries and family consumption patterns. If the benefit was considered an element of compensation then DOD would be placed in a position of paying cash to military members who did not have access to a commissary. [Ref. 36]

The First QRMC also recommended that military compensation be tied to Federal Civilian wages. To do this there had to be a set "basic" rate used to value military compensation. The figure used for this was Regular Military Compensation or RMC which included base pay and allowances for subsistence and quarters. This rate would be computed and compared to predetermined equivalency points for the

government's civilian employee General Schedule (GS) and the military's pay tables. The General Schedule is periodically updated to reflect the latest standard of compensation based on a private sector comparison. This creates an often cited argument that if military compensation is comparable to civilian pay then how can the need for commissaries be justified. This same sentiment has continued to fuel support for commissary self-sufficiency.

In 1969, a study by the Logistics Management Institute was conducted at the direction of the Office of the Secretary of Defense. It recommended that the CONUS commissary retail system should be self-sufficient. This means that government subsidies would be discontinued except for overseas locations and contingency operations. It further recommended that commissaries should be merged with exchanges and operated in a similar fashion, that is, without direct appropriation support. (The military exchange system does receive some minor indirect support.) It was believed that through added economies food prices could remain at 5% above cost and the nonfood items could be sold at the higher exchange prices. From a taxpayer perspective this combined system would be more cost-effective and could still provide an adequate economic benefit estimated to be between 10%-12%. [Ref. 37]

In 1973, Congress decided to establish a plan to raise surcharges over the next few years until the commissary system was completely self-sufficient. The Fiscal Year 1974 DOD Appropriation Bill increased commissary surcharges to 3% and called for subsequent increases in 1976 and 1978 [Ref. 38]. Congress believed that commissaries provided a convenience similar to base exchanges. However, they were not convinced on the disadvantage of price since commercial grocery stores were being used by the general public with no complaints of unreasonable price.

Following the intent of Congress, the Pentagon's

budgetary process for the Fiscal Year 1975 budget submission included a program budget decision that proposed elimination of appropriation funding for the commissary system. Program Budget Decision 282 called for the substitution of surcharge funds in lieu of appropriated funds for certain operating costs. These system costs included those for military and civilian employees and utility costs for overseas locations. (Utility costs for CONUS activities were already being reimbursed with surcharge funds.) However, overseas transportation costs would continue to be covered by appropriated funds. This policy would be implemented on 1 October 1975 and was scheduled to be phased over a two year period. [Ref. 39]

The budget decision also called for a major comprehensive study of the commissary system. The primary purpose of this study was to recommend ways to improve overall system efficiency. It was believed that through greater efficiency the current commissary system could preserve customer savings while meeting mandated appropriated fund reimbursements. As will be seen, this study was only the first of many studies to occur over the next twenty years.

D. RECENT STUDIES

As was stated in Chapter I, privatization is any government action that reduces government influence and increases market forces of supply and demand. Privatization of the commissary system began with the introduction of surcharges in 1952. The commissary system has been an annual budgetary target and will continue to be so until the system becomes self-sufficient or is eliminated. The use of studies has been an instrument employed by both the Pentagon and Congress to either defend or attack the commissary system.

The commissary system became seriously threatened when the First QRMCI indicated that the commissary benefit should no

longer be considered as part of compensation. Further damage was inflicted when the Logistics Management Institute recommended discontinuance of the government subsidy. A final blow came from the 1974 DOD Appropriation Bill that presented a plan for complete self-sufficiency. In 1975, the Bowers Commission was created in part as a defense against these continued attempts towards reducing the commissary system.

The Bowers Commission produced four alternatives to the current system:

1. Create centralized service-wide management organizations to operate individual service commissary stores.
2. Merge commissaries with exchanges.
3. Establish a joint service commissary agency to operate all DOD commissary stores.
4. Operate commissaries under a Government-owned, Contractor-operated (GOCO) system.

Of the four alternatives the Commission recommended alternative three. [Ref. 40]

No action was taken on the recommendations from the Bowers Commission and in 1976 the surcharge was increased to 4%. The 1974, DOD Appropriation Bill called for another surcharge increase in 1978. but it was never imposed. [Ref. 41]

In 1980, the General Accounting Office (GAO) performed an independent analysis of the commissary system. The purpose for this analysis was to review system justification, appropriated support and overall management. The following recommendations represent its major points:

1. Determine if there is a need for commissary benefits and provide data to support this need. Also, alternative programs should be identified to meet this need and then analyzed for cost-effectiveness.

2. Justification criteria should be made realistic and a report made to Congress for continuing commissary operations.
3. The four separate commissary systems should be consolidated into one single agency.
4. Congress should enact specific legislation identifying redefined operating conditions and then require self-sustaining operation of any stores not meeting the new criteria.

Comments made by DOD indicated that the report did not recognize the evolutionary changes in the commissary system. It also did not consider the quality of life that the stores maintain and the offset provided for lower pay and the demands of military life. In response to DOD comments, GAO countered that any justification based on insufficient pay should be dealt with as a separate pay matter and any other arguments for commissary justification should be supported with adequate data. [Ref. 42]

The early 1980's introduced some of the largest pay raises ever seen by the modern force. These pay raises indirectly led to another surcharge increase in 1983 which brought the surcharge rate to 5%. In a short period of ten years the surcharge rate had more than doubled. The commissary lost some influence as an income inflator due to the surcharge increases and it also experienced new challenges from growing privatization groups.

In 1983 the Privatization Task Force of the President's Private Sector Survey on Cost Control, known as the Grace Commission, received a charter to identify privatization measures for the government. Among other recommendations for government savings the Grace Commission recommended privatization of the commissary system. The Commission estimated that approximately \$2.4 billion could be saved over

three years through the sale of commissary stores. A later separate analysis by the GAO stated that the savings were overestimated and that \$1 billion was more realistic. [Ref. 43]

In 1987, a presidential executive order was issued to establish a President's Commission on Privatization. The Commission's report indicated that there were some 240 stores in CONUS competing with local retailers. Since there were adequate commercial retail grocery stores in CONUS, the Commission concluded that greater efficiencies could be achieved through private sector participation with the contracting out of commissary operations.

In response to continued privatization pressures from the commercial grocery industry, the Chairman of the Morale, Welfare and Recreation Panel, Subcommittee on Readiness, of the House Committee on Armed Services, requested DOD to conduct a comprehensive study of the commissary system. To provide temporary relief from privatization forces, the Fiscal Year 1989 Defense Authorization Bill prohibited privatization of military commissaries. This congressional request established the last major study of the commissary system called the Jones Commission. The Jones Commission mandate was similar to the Bowers Commission conducted fourteen years earlier. Again, DOD was searching for recommendations to provide increased efficiencies in order to reduce dependence on appropriation funds. Although the Jones Commission produced more recommendations than the Bowers Commission it echoed a similar theme of a consolidated commissary system headed by a centralized DOD agency.

Until World War II, the commissary system kept pace with the rest of the military establishment expanding at every opportunity. Through the last four decades the commissary system has faced a series of challenges designed to either reduce its size or eliminate it altogether. These actions

make it clear that the trend of growth established by the commissary system in the first half of the century could not continue through the second half. These challenges exist even today and have apparently been successful since the commissary system has dwindled from 258 CONUS stores in 1990 to 214 in 1994 [Ref. 44].

Over the years Congress has been steadfast in providing continued support for the commissary system by continually granting appropriated fund support. The economic benefit produced by the commissary system, if terminated, would have the same effect as reducing military pay. The underlying issue is whether there remains a more cost-effective means of providing this highly valued economic benefit.

E. FUTURE ISSUES

Today the military commissary benefit is viewed as an essential entitlement. Existing survey data has repeatedly revealed that active duty personnel value this noncash economic benefit as second only to medical benefits. The importance and commitment of the military services is best illustrated by frequent supportive statements made by recent Defense Secretaries. They have repeatedly offered strong resistance to studies recommending changes to the commissary system.

As a result of the Jones Commission findings, the Defense Commissary Agency (DECA) was formed on 1 October 1991 to provide centralized management of all DOD commissary operations. One of the main issues that the newly formed agency had to deal with was the effects of the military downsizing. The decision of Base Closure and Realignment Commission (BRAC) to close 129 domestic facilities and the realignment of 46 others presents a patron base that will be reduced and relocated. Some commissaries will close and others will either become underutilized or overcrowded. In

addition, the Clinton administration is seeking a final force drawdown figure of 1.2 million which is 200,000 less than the Bush administration. This compares to an active duty force that was approximately 2.0 million in 1990. [Ref. 45]

The problem that this situation creates is that a diminishing customer base will lead to reduced sales. As stated earlier the system is now partially self-sufficient due to surcharge revenues that are generated by the 5% surcharge on total sales. If sales decline, then surcharge revenues will also dwindle requiring either higher appropriated fund support or higher surcharge rates. Congress is less inclined to increase appropriated support because of its unwavering intent on reducing the defense budget. This will almost certainly lead to higher surcharges which will reduce the member's economic benefit.

One immediate response to this dilemma is to again seek out system efficiencies to offset the loss in surcharge revenue due to reduced sales. The initial predicted savings of \$132.8 million in annual savings has already been surpassed. In a statement prepared by the head of DECA to the House Armed Services Morale, Welfare and Recreation Panel on 15 March 1994 it was reported that the actual annual savings from system consolidation was currently at \$144 million. This increased savings will ease the situation somewhat but may not entirely offset future lost surcharge revenues from shrinking sales.

In 1994, while reviewing this situation the Pentagon drafted a proposal that was included in a report by the DOD Office of Program Analysis and Evaluation. The proposal explained the lost revenues paradox and recommended raising the surcharge rate by one percentage point each year until it reached 10% to 15%. The proposal surfaced as part of the Fiscal Year 1996 budget review process. This increase in surcharge would eliminate the commissary's need for

appropriated funds allowing the Pentagon to program these funds towards other requirements. At approximately \$1.1 billion per year, reducing support for commissary operations would help preserve other needed line items within the DOD budget. [Ref. 46]

Also in 1994, the GAO identified a list of 43 possible commissary stores that were considered to be outstanding candidates for conversion into self-supporting, exchange-run grocery stores. This would make commissaries similar to the exchange managed convenience stores sometimes referred to as "MiniMart". This plan was modeled after the current test program in place at Carswell Air Force Base in Texas. The test program was directed by Xongress in 1993. Under this system all nonfood items are marked up to match normal exchange profit levels while food items are just slightly higher in order to meet higher exchange overhead costs. The 5% commissary surcharge is based on government subsidies and is insufficient to meet the exchanges higher overhead rate. The report also recommended closing 26 other commissaries because they were within 25 miles of another commissary. The GAO report indicates that self-sufficiency advocates have not disappeared and are likely to continue as future adversaries to the commissary system. [Ref. 47]

As long as there is a budgetary process it appears there will be competing items within the budget to rival commissary appropriation support. The main issues of downsizing, the closing of military bases, and future changes in the military personnel profile will undoubtedly have negative effects on the commissary system. In anticipation of these future changes this thesis will attempt to identify a better, more cost-effective means of provisioning the economic compensatory benefit provided by the commissary system.

In summary, this chapter provided some background information on the commissary system. It also included some

history on military pay in order to gain a full understanding of the evolutionary process of the commissary fringe benefit as part of the overall compensation system. While the system continued to grow during the first half of this century it seemed evident that forces would eventually emerge to counter its growth. These self-sufficiency forces that developed during the last half of this century will probably continue into to increase into the next. The pressures that these forces bear on DOD's budget will probably not subside until the commissary system is either eliminated or no longer dependent on appropriated funds.

III. RESEARCH METHODOLOGY

A. OVERVIEW

The focus will now shift from the commissary system as described in Chapter II to the commissary benefit - the economic value that the system produces. In order to determine if direct cash compensation is more cost-effective, a cost comparison will have to be established between the current system and the proposed alternative. Prior to making a cost comparison, a benefit value will have to be established. This will entail a bifurcated process in which both aggregate and apportioned values will need to be determined. Calculating the aggregate value should be a facile task but attempting to measure an apportioned value will definitely lead to some complexity. The rationale for this is that the benefit provides unequal value to its beneficiaries. The value of the benefit is dependent on such variables as family size, income level, consumption patterns, frequency, and access to commissaries. This led the First QRMC to conclude that the commissary benefit should no longer be an element of compensation.

Despite this significant challenge, accepted methods are available to produce reasonable estimates. In addition to dealing with the value measurement issue, this chapter will also identify the various data sources used in this thesis and the means used to accumulate the data.

B. INFORMATION SOURCES

The background literary information for this thesis emanated from three major archives. The first source investigated was the Defense Technical Information Center (DTIC) and the Defense Logistics Studies Information Exchange (DLSIE). The second source was the Naval Postgraduate School Dudley Knox Library which also included the "Air University Index to Military Periodicals" and the "Business Periodicals

Index." The last major source was the General Accounting Office's (GAO) reports database.

All the information sources had automated databases that greatly facilitated the data search process. Altogether the above sources produced data search listings that accumulated over 500 possible sources. These listings were examined and reduced to about 45 references that were actually used to develop the theory, background information, and methodology for this thesis.

The Defense Commissary Agency (DECA) provided some additional background information and provided some current operations data. The military demographic statistical data was provided by the Defense Manpower Data Center (DMDC) through copies of "Selected Manpower Statistics." "Selected Manpower Statistics" is an annual publication distributed by DOD's Directorate for Information Operations and Reports (DIOR). Lastly, DOD's Office of Program Analysis and Evaluation provided some political insight on direct cash compensation theory. It also identified some criteria that would have to be met for direct cash compensation to be a viable alternative.

C. METHOD OF COLLECTION

The primary method of data collection was an extensive archival investigation. This investigation uncovered various literature and documentation to facilitate an examination of both past and present research efforts. The investigative effort originally encompassed two primary subject areas and later involved a third supplemental area.

The first subject area disclosed data concerned with government privatization. This provided an in-depth understanding of concepts, current methods, and ideal conditions for successful implementation. The second subject area centered on the commissary system. This data consisted

of historical literature and past research studies, mainly the Bowers and Jones Commissions, conducted to improve the commissary system.

Supplemental research was conducted on the military compensation system. This was done to understand the commissary as a fringe benefit and its relationship to the overall pay system. The major studies reviewed during this process included the First, Fifth, and Seventh QRMC studies. These compensation studies are conducted every four years starting with the First QRMC in 1967. The First QRMC was an initial attempt at establishing military pay concepts. The Fifth QRMC provided a comprehensive review of the military retirement system in 1984. The Seventh QRMC was the most recent study of military compensation conducted in 1992. These studies provided the evolutionary background for the military compensation system and the rationale used to develop and justify various compensatory benefits including commissaries.

A secondary method of data collection came from informal interviews with selected personal contacts and by telephone conversations with DOD's Office of Program Analysis and Evaluation and DECA. Information provided by agency sources was first confirmed by external literary sources before being used in this research. This method, although tedious, was performed mainly to minimize agency bias. Personal contact was made with DMDC to collect data on military demographics. Lastly, general population data used for demographic comparisons was retrieved from the 1993 "Statistical Abstract of the United States" published by the Department of Commerce, Bureau of the Census.

D. SURVEY DATA

The data collection process uncovered numerous studies and surveys performed to measure commissary savings rates, to

evaluate user preferences and antipathies, and to provide a basis for continued commissary justification. Unfortunately, there was little data collected to categorize the customer base, determine customer frequency, or measure customer commissary expenditures in relation to total food expenditures. This was unanticipated due to the number of studies and surveys that were collected.

Despite the lack of customer base data, there was sufficient data to make adequate estimates to conclude direct cash compensation feasibility. Alternate forms of data existed to provide sufficient means for conducting a benefit value comparison. For customer base breakdown, DECA estimates that commissary usage is approximately 46% active duty, 49% retirees and 5% other. The other category consists of reserves, surviving spouses, certain government employees, and other authorized shoppers [Ref. 48]. To provide simplicity the customer base will be assumed to be comprised of mainly active duty and retirees.

Many studies have been performed to compute the savings provided by the commissary system. Varying results have been produced that suggest locality and market basket elements as possible factors for different survey outcomes. Specifically, market basket elements consisting of national brand items present a basis for survey bias. Most commercial grocery chains carry generic or store brand items. The commissary system only carries mainly national name brand items. Since most military families are on tight budgets they would be more inclined to purchase generic brands rather than the national brands. This would attribute to higher survey results for commissary savings.

Studies on commissary savings have been performed on various individual commissary stores. These studies were all performed in the same manner. They involved total sales cost comparisons between at least two major grocery chain stores

from the nearby community and the installation commissary store. First, a representative market basket or grocery list was selected. Next, a total sales cost including sales tax was computed based on labeled shelf prices. Then the totals were compared and a percentage price difference was calculated. The results, labeled as local commissary savings percentages ranged from 19% to 30%. Nationally conducted surveys performed by DECA indicate the savings range between 20% and 30%, depending on locality. DECA's advertised average savings for the commissary system is 23.4% [Ref. 49]. Correcting for market basket bias would reduce this estimated savings by approximately 5% [Ref. 50] or to 18.4%. The savings rate used for this study will be 20%. There are two reasons for using this figure. First, is the ease that rounding provides and second, 20% still remains as the price criteria that was first established by DOD in 1949.

Many studies have attempted to "value" the commissary benefit. "Value" as it pertains to these studies was mainly the savings rate of a local commissary store. For example, if a commissary market basket priced at \$100 was compared to a similar commercial market basket of \$125 then this would produce a price differential of \$25. The benefit value would then be 25% ($\$25/\100). To eliminate any possible confusion, this thesis will term the 25% as the store or system "savings rate" and not as the benefit's "value."

The income effect of this benefit is then computed as a function of the benefit savings rate. The savings rate of 25% is multiplied by the actual expenditure to produce actual customer savings. In a scenario where \$200 is spent at the commissary then a \$40 ($\$200 \times 25\%$) savings would be produced. This \$40 cost savings can be applied to other expenditures thus creating added disposable income for the military member. This is why any increase to the surcharge rate is so greatly opposed by the military families.

E. BENEFIT VALUATION

The valuation of fringe benefits can be calculated through three different methods. First, a benefit can be valued based on employer costs. For instance, if a company provides a fringe benefit like health insurance it might pay \$3,000 per year per employee. The compensatory value of this benefit from the employer's perspective is \$3,000.

Second, benefit valuation can be based on actual market costs. Through economic packaging the employer has secured a price of \$3,000 but if the employee entered the market place on their own the cost for the same coverage might be \$4,000 per year.

Finally, the last valuation method is what the employee thinks the benefit is worth. From the employee's perspective this fringe benefit could have zero value if the benefit is not used or it could have a much more substantial value if used frequently. Suppose the company offered an option of receiving the company coverage or receiving \$2,500 in cash payment. Because some people prefer cash to in-kind benefits they might opt to receive the cash even though it is less than the employers' cost of \$3,000. The employees electing to receive the cash, might purchase less coverage or different coverage to meet their own specific needs, and then pocket the difference. Either way the value of the benefit from the employee's perspective would be \$2,500. Chapter IV will analyze the commissary benefit using the same three method fashion.

In summary, this chapter has identified the sources of information, method of collection, existing data from studies and surveys, and the methods that will be used to value the commissary benefit. The next chapter will address the legal right to commissary benefits, estimate a benefit value, make a cost comparison, and determine if commuted payments are a feasible alternative.

IV. DATA PRESENTATION AND ANALYSIS

A. OVERVIEW

This chapter will present and analyze data to determine if direct cash payment in lieu of commissary privileges is feasible. First, some key observations obtained from informal interviews will be introduced. These interviews identify some important issues and concerns that need to be addressed. The policy of commissary benefits will be analyzed to ascertain the legal claim to commissary benefits posed by the second research question. Next, in response to the third research question a benefit value will be calculated from both an employer's perspective and then from a member's perspective.

The employer's perspective will measure the benefit value by dividing total system costs by total beneficiaries. Then, the member's perspective will estimate benefit value from a usage standpoint. After benefit values are established, they will be compared to system costs. These cost comparisons will determine if direct cash compensation is a more cost-effective alternative. Again, the cost comparisons will be made only for the CONUS portion of the system. And finally, the last research question concerning the feasibility of the direct cash compensation alternative will be evaluated.

B. INFORMAL INTERVIEWS

Informal personal interviews were conducted with various ranking military officers and some officer spouses. From these different perspectives four observations seem to summarize the main characteristics that beneficiaries associate with commissary benefits.

The first observation is from a retired Navy Rear Admiral. He viewed the benefit as a guaranteed right under his retirement compensation package and if commissaries were eliminated then a cash offset would have to be paid to retired personnel. He indicated that his wife, who makes all

household grocery purchases, did not shop at the commissary. She had several reasons for not doing so. One reason was due to the proximity of local stores. She felt it was inconvenient to drive across town to access the commissary. In addition, she felt the savings produced from shopping for a two member household were inadequate to justify the added inconvenience. Although his wife did not exercise use of the benefit, he stated that the nonuse of the commissary was greatly reducing the value of their retirement package. However, he could not estimate any amount for this lost value.

The next observation is from an Army Captain and his wife who had no children. He had almost twenty years of service and started in the enlisted ranks. His wife became absolutely irate at the suggestion of eliminating commissary stores. His wife claimed that enlisted personnel would suffer hardship without commissary benefits because, after all, many of them were already receiving food stamps. The Army Captain was more reserved and was curious of the proposed alternative. When queried if an offset of \$50-\$75 would be fair they both claimed that it roughly reflected their commissary savings. In fact, his wife added that she already did quite a bit of her shopping at the local Costco (a regional discount chain of warehouse type wholesale stores) and would prefer to do the rest at the local Safeway.

A Navy Lieutenant provided another opinion. He was just recently married but still held a bachelor's viewpoint to the Navy's compensation system. He stated that he could not understand why married members received higher allowances. He claimed that during a previous sea tour all the ship's officers with the rank of Lieutenant and below who were married had no children. Their wives also worked making their household incomes already higher than his. In his opinion they did not need any added income for being married and that the commissary only tended to inflate real incomes for married

and family households. In addition, he lived aboard a sail boat and due to small galley space he mostly ate out and could not capitalize on the commissary benefit. Even now that he is married and his wife works, they share the same opinion as the retired Rear Admiral's wife. They feel that their small amount of shopping does not justify the inconvenience of traveling across town to use the commissary.

The final observation came from a Navy Lieutenant Commander's spouse. She stated that if commissaries were eliminated the government would have to give her an added \$1,000 per month to make up for her lost commissary benefit. She indicated that not only did the government have an obligation to her and her husband but that her claim would be even higher because she had two children. This absurd rationale based on dependency status was equivalent to the claim of a welfare recipient. The military compensation system should not be construed as a welfare system based on the number of dependents. However, her estimated benefit value of \$1,000 per month was the real issue of interest.

Immediately without a doubt this figure appeared to be inflated. It was assumed that the \$1,000 per month figure was her total food budget and not an estimate of her commissary purchases. Even with this assumption it seemed inconceivable that a family of four could spend \$12,000 a year or almost one third of a family's total income for food. The Bureau of Labor Statistics indicates that the national average for a total food budget is approximately 21.56% of gross income. The monthly gross income for a Lieutenant Commander (over 12 years service) is about \$3,500 per month (1994 pay table). This means that their average monthly total food budget should be approximately \$755 ($\$3,500 \times 21.56\%$). When presented with this information she agreed that perhaps her total food purchases were about \$700 per month.

The next item of interest was what portion of her monthly \$700 total food budget was actually spent at the commissary. Considering today's consumer-oriented food market which caters to just about every need or desire, it would be impractical to assume that a modern military family spends its entire food budget at the commissary. A study performed by the U.S. Army Research Institute (ARI) indicated that roughly 40% of a military family's total food expenditures are made at the commissary [Ref. 51]. This means that the above spouse's actual amount spent at the commissary would be about \$280 per month. If the commissary expenditure is indexed for the average system savings rate of 20% then the lost savings would be \$56 per month. Her direct cash payment would be \$56 vice the \$1,000 per month that was originally suggested. This situation seems to support the phenomenon that the perceived value of benefits multiply when elimination is suggested. The Navy spouse acknowledged these figures as probably fair estimates of their family food expenditures. In fact, like the Army Captain's wife she too admitted that most of her grocery shopping was probably done at her neighborhood Price Club (a chain of warehouse type stores similar to Costco).

These informal interviews identified some basic issues that need to be addressed if direct cash payment is to be a viable option. The first issue was that revealed by the Rear Admiral concerning legal claim to the benefit and the offset that would have to be provided to the retirement community. The next issue was the concern for enlisted personnel as described by the Army Captain's wife. Another aspect is the dependency pay differential and "needs based" compensation as described by the Navy Lieutenant. And finally, a further analysis had to be made of the major issue concerning benefit value. An estimate had to be produced that fairly provided a cash offset while still remaining cost-effective.

C. ENTITLEMENT OR PRIVILEGE

The thesis will now address the second research question which mainly concerns the legal claim to commissary benefits perceived by its beneficiaries. If the right to commissary benefits are a legal claim such as social security benefits or welfare assistance then they should perhaps be considered an entitlement. If commissary benefits are entitlements then anyone not receiving the benefit would be entitled to an equivalent cash payment. On the other hand, if commissary benefits are not an entitlement, then how should they be classified? Perhaps a compensatory fringe benefit or maybe a privilege?

The first step will be to define each of these categories to determine which best describes this benefit. An entitlement is a non-compensatory government payment for which there is legislation to support a legal claim. A fringe benefit is a compensatory payment made by an employer that is non-discriminatory and apportioned to all employees. Payroll fringe benefits increase personnel costs but do not affect basic wages or income. These benefits are good for employees because they provide an increase in real income but are not included as gross income and so are not taxable. Fringe benefits are good for employers because they provide a greater income to employees but through gained economies they are normally less expensive than actual wages. Lastly, there are privileges. Privileges are granted to employees at the discretion of the employer and may or may not induce an income benefit.

Social security, welfare, medicare, etc. all qualify as entitlements. Social security is different from other entitlements because they are contributory benefits, i.e. workers pay into the system through social security taxes. The federal retirement programs for civil service and military personnel are not entitlements because they are compensatory

programs. These retirement programs are employer fringe benefits because they contribute to the employer's overall personnel costs. They provide increased compensation to the employee without increasing current wages. Other examples of fringe benefits would be paid holidays or health insurance.

Viewing the commissary benefit in similar fashion makes it easy to determine that it is not an entitlement. This means it is either a fringe benefit or a privilege. Many beneficiaries assume it to be a fringe benefit. This assumption is based on the fact that it is compensatory in nature because of the cost savings generated and it is the right of every beneficiary. The Armed Services Commissary Regulations uses both terms to refer to commissary use. But according to the definition of a fringe benefit it has to be apportioned or guaranteed to all employees. Meals or rations and housing are military fringe benefits because they are compensatory and apportioned to all members. Those members who are not provided with rations and housing in-kind receive cash allowances. Commissary benefits are different from rations and housing for two reasons. First, they are not only offered to active duty military members (employees) but are also offered to dependents (non-employees). Second, commissary benefits are not guaranteed to all beneficiaries. For example, some personnel assigned to recruiting duty in areas without military installations are inaccessible to commissary benefits and are not provided with any additional cash compensation. Similarly, retirees and reservists located near closed bases due to downsizing are in the same situation.

The lack of cash compensation for nonaccessibility makes the commissary benefit a privilege. It is a privilege that can be used by entitled beneficiaries but if a commissary store is inaccessible then there exists no legal claim against the government. This led the First QPMC to determine that commissary benefits should no longer be used as part of the

compensation formula to determine pay raises. This also addresses the issue of retiree legal claim. When retirees leave the service they retain many of their benefits as privileges. They have the privilege to use all base facilities including athletic, recreational, medical and dental clinics, and exchanges and commissaries. But if for any reason these facilities are unable to support retirees, there is no legal claim against the government to provide any commuted payment. Even medical treatment is offered on a space available basis. The retirees are prioritized after active duty dependents for medical purposes. This means that they can seldom get various follow-up treatment. [Ref. 52]

During overseas assignments, both DOD and non-DOD civilian personnel are also authorized commissary privileges. This issue will be ignored since this study is only considering the CONUS portion of the commissary system. The Reserves are currently authorized 14 usage days per year (not to include periods of active duty). During periods of active duty reserve personnel are authorized unlimited privileges similar to other active duty personnel. This leaves the last major group of beneficiaries: active duty personnel and their dependents.

Whether active duty personnel receive additional cash compensation in lieu of commissary privileges would remain a pay matter. Despite what anyone thinks there is no legal claim to these privileges. This action would be similar to the reduction in the Morale, Welfare, and Recreation appropriation that occurred throughout the 1980's. Dependents must now pay user fees to many recreational facilities that were once free. This same reduction in funding can happen at any time to the commissary system making surcharge rates higher and reducing the cost savings of the system. Although there is no legal obligation for the government to make

commuted payments it might consider to do so or the active duty force would be faced with a pay reduction. This reduction in real income would in turn have a negative impact on the active duty force's "quality of life," a continued top concern for DOD. The feasibility of such payments will be analyzed next.

D. BENEFIT VALUATION

Current funding for the commissary system is derived from both surcharge revenue and Appropriated Fund Support (AFS). Only AFS or taxpayer costs will be considered in making cost comparisons. Surcharges are provided by the beneficiaries and will not be considered as part of the cost comparison since the 5% surcharge is already taken into account during savings rate measurements.

Appropriated funds were approximately \$1.16 billion in Fiscal Year 1993. The Fiscal Year 1995 DOD Authorization Bill included an additional \$40 million bringing the taxpayer's total support to \$1.2 billion. Of this \$1.2 billion, approximately \$576 million is estimated to be earmarked for funding CONUS operations. The same 1995 Authorization Bill also set a target of 1.5 million active duty personnel which is about 85,000 fewer than Fiscal Year 1994 (FY94). The Clinton administration currently plans to draw down the active duty force to as few as 1.4 million by 1997. However, this analysis will be based on FY95 figures. As stated in the introduction to this chapter, employee benefits can be valued from both employer and employee perspectives. Table 4.1 demonstrates the employer's perspective of valuing employee benefits, that is, by the total cost to provide those benefits.

TOTAL FY95 APPROPRIATED FUND SUPPORT	\$1,200 MILLION
TOTAL FY95 AUTHORIZED ACTIVE DUTY FORCE	÷ 1.5 MILLION
MEMBER'S AVERAGE ANNUAL BENEFIT VALUE	\$800.00
AVERAGE MONTHLY VALUE (\$725.00 ÷ 12 MONTHS)	\$66.67

TABLE 4-1. Member's Average Annual and Monthly Benefit Value.

The benefit will now be valued from an employee's perspective. This perspective is based on actual usage. Since savings are a function of income level, family size and individual spending patterns, measuring the benefit's value will be more involved than it would appear. Because of the diverse individual savings rates, average savings rates were determined for each pay grade. These average pay grade savings rates were then multiplied by the average monthly gross incomes to estimate actual commissary savings. Average monthly gross incomes were determined by considering average flow points for promotion and then averaging the base pay for those flow points based on normal years of service. The average base pay for each pay grade were then added to their corresponding monthly BAQ and BAS to estimate average monthly gross incomes. Average monthly gross incomes were multiplied by average consumer food expenditure rates to produce average annual and monthly commissary savings per pay grade.

Tables 4-2, 4-3, and 4-4 are estimates of the average monthly gross income for each pay grade. Basic pay, BAQ and BAS data were transcribed from the 1994 military pay table. The actual flow points were determined by considering advancement eligibility along with actual advancement patterns.

PAY GRADE	FLOW POINTS	AVERAGE BASIC PAY	BAQ	BAS	AVERAGE MONTHLY GROSS INCOME
E-1	<2 YEARS	\$832.80	\$320.10	\$204.00	\$1,356.90
E-2	<2 YEARS	\$933.30	\$320.10	\$204.00	\$1,457.40
E-3	<2 YEARS	\$1,023.00			
	<2 YEARS	\$1,063.80			
		\$1,043.40	\$336.30	\$204.00	\$1,583.70
E-4	>3 YEARS	\$1,151.10			
	>4 YEARS	\$1,239.90			
		\$1,196.50	\$361.50	\$204.00	\$1,761.00
E-5	>6 YEARS	\$1,401.00			
	>8 YEARS	\$1,458.00			
	>10 YEARS	\$1,515.60			
		\$1,458.20	\$415.50	\$204.00	\$2,077.70
E-6	>8 YEARS	\$1,599.90			
	>10 YEARS	\$1,658.70			
	>12 YEARS	\$1,744.20			
		\$1,667.60	\$462.30	\$204.00	\$2,333.90
E-7	>10 YEARS	\$1,865.10			
	>12 YEARS	\$1,923.30			
	>14 YEARS	\$2,010.30			
		\$1,932.90	\$500.10	\$204.00	\$2,637.00
E-8	>14 YEARS	\$2,267.70			
	>16 YEARS	\$2,327.70			
	>18 YEARS	\$2,381.10			
		\$2,325.50	\$538.50	\$204.00	\$3,068.00
E-9	>20 YEARS	\$2,783.40			
	>22 YEARS	\$2,929.20			
	>24 YEARS	\$3,043.20			
		\$2,918.60	\$584.10	\$204.00	\$3,706.70

TABLE 4-2. Enlisted Average Monthly Gross Income.

PAY GRADE	FLOW POINTS	AVERAGE BASE PAY	BAQ	BAS	AVERAGE MONTHLY GROSS INCOME
W-1	>10 YEARS	\$2,005.80			
	>12 YEARS	\$2,088.90			
		\$2,047.35	\$444.00	\$142.46	\$2,633.81
W-2	>12 YEARS	\$2,276.70			
	>14 YEARS	\$2,355.30			
		\$2,316.00	\$513.30	\$142.46	\$2,971.76
W-3	>14 YEARS	\$2,623.50			
	>16 YEARS	\$2,701.80			
		\$2,662.65	\$558.00	\$142.46	\$3,363.11
W-4	>18 YEARS	\$3,187.50			
	>20 YEARS	\$3,290.40			
		\$3,238.95	\$608.70	\$142.46	\$3,990.11
W-5	>20 YEARS	\$3,662.70			
	>22 YEARS	\$3,801.60			
		\$3,732.15	\$663.90	\$142.46	\$4,538.51

TABLE 4-3. Warrant Officer Average Monthly Gross Income.

PAY GRADE	FLOW POINTS	AVERAGE BASE PAY	BAQ	BAS	AVERAGE MONTHLY GROSS INCOME
O-1	<2 YEARS	\$1,594.80	\$434.40	\$142.46	\$2,171.66
O-2	>2 YEARS	\$2,005.80			
	>3 YEARS	\$2,410.20			
		\$2,208.00	\$486.30	\$142.46	\$2,836.76
O-3	>4 YEARS	\$2,785.80			
	>6 YEARS	\$2,919.00			
	>8 YEARS	\$3,023.70			
		\$2,909.50	\$569.40	\$142.46	\$3,621.36
O-4	>10 YEARS	\$3,345.00			
	>12 YEARS	\$3,533.10			
	>14 YEARS	\$3,694.20			
		\$3,524.10	\$687.90	\$142.46	\$4,354.46
O-5	>16 YEARS	\$4,203.90			
	>18 YEARS	\$4,444.50			
	>20 YEARS	\$4,579.50			
		\$4,409.30	\$780.30	\$142.46	\$5,332.06
O-6	>22 YEARS	\$5,355.60			
	>24 YEARS	\$5,536.80			
	>26 YEARS	\$5,808.60			
		\$5,567.00	\$809.70	\$142.46	\$6,519.16
O-7	MAXIMUM	\$6,611.10	\$899.10	\$142.46	\$7,652.66

TABLE 4-4. Officer Average Monthly Gross Income.

The officer average monthly gross income schedule, Table 4-4, does not include pay grades O-8 to O-10. There are several reasons for this. One reason is that, as a matter of practice, allowances for pay grades O-7 and above (flag officers) are equivalent. This is due to the fact that flag officer total compensation is capped in relation to Federal Schedule Senior Executive Service pay levels. Another factor supporting the decision to group the flag officer pay grades was that as a group they were statistically insignificant. Flag officers comprise only about .05% of the active duty force. Also, the consumer food expenditure rates do not dramatically increase over these pay grades.

Consumer food expenditure rates are calculated by the Census Bureau and published annually. They reflect average amounts of gross income that are spent on housing, food and other household items. They are produced as part of the Consumer Expenditure Survey program which collects data in order to annually revise the Consumer Price Index. The data published in the 1993 "Statistical Abstract of the United States" is segmented into various categories. The categories include age, geographic region, household size, occupation, and income level. Total food expenditures encompass both food consumed at home and away from home. Food consumed at home includes groceries purchased from commissaries and other commercial facilities including convenience store and warehouse type purchases.

Most people believe that household size is the strongest variable affecting food expenditures but the data suggests otherwise. According to the data, food expenditures are most significantly influenced by income level. An inference that can be drawn from the data is that as income increases, so do food expenditures but at a slower rate. This causes expenditure rates to decrease as income increases. Food expenditure increases caused by increases in income level are

gradual as compared to household size increases. Over time as household size increases, total food expenditures increase but at a slower rate than produced by increased income over the same period. In other words, total food expenditures would increase over time even if household sizes remained constant.

Food expenditures are actually a nonlinear function. For income levels around \$10,000 the average total food expenditure rate is about 30%. As income levels approach \$20,000 they average about 19% and decline by slightly less than 1% per \$1,000 increase in income. From the \$15,000 to \$25,000 gross income level the expenditure rate decreases by about 8%. At the \$40,000 to \$60,000 range the rates decrease by about .5% per \$1,000 increase in income. Beyond \$80,000, expenditure rates decline by approximately .025% per \$1,000. From the \$40,000 to \$80,000 income level the rate decreases by only 4.5%. In the case of flag officers, once gross income approaches the \$100,000 range the differential between food expenditure rates becomes very small. [Ref. 53]

The data for annual gross income levels were distributed by quintiles ranging from \$5,981 to \$81,594. The survey sample population was fairly representative of the military in that 86.17% of the force had incomes between the second and fourth quintiles. Pay grades E-1 through E-5 or 58.98% of the force had incomes between the second and third quintiles. Only the income levels of the flag officers exceeded the data range. For this reason the food expenditure rates for income levels were used in estimating average commissary savings.

Table 4-5 is a representation of a formula used by an Army Research Institute (ARI) study conducted in 1984 [Ref. 54]. The study analyzed lifetime earnings for civilian and military personnel. The Census Bureau's national average for total food expenditures based on income level was used to estimate commissary savings. It also assumed an average commissary expenditure rate of 40%. This means that

for every \$100 spent for total food (at home and away from home) \$40 is spent at the commissary.

Table 4-6 takes a similar approach except that it demonstrates a further break down on food expenditure rates. It uses a commissary expenditure rate based on percentage of at home food expenditures rather than total income as did the ARI rate. It also uses a commissary savings rate of 20% vice 23% (explained in Chapter III). The new approach estimates the net commissary expenditure rate to be 11.74% which is slightly higher than ARI's 9.8%. It also estimates the average net commissary savings rate based on total income to be 2.35% which again is slightly higher than ARI's 2.25%. Table 4-7 provides an example using these expenditure rates. Tables 4-8, 4-9, and 4-10 present estimates for the average monthly commissary savings for each pay grade.

TOTAL FOOD EXPENDITURE RATE	X	TOTAL GROSS INCOME AVERAGE COMMISSARY EXPENDITURE RATE	=	NET COMMISSARY EXPENDITURE RATE
24.5%	X	40%	=	9.8%
NET COMMISSARY EXPENDITURE RATE	X	AVERAGE COMMISSARY SAVINGS RATE	=	ARI AVERAGE NET COMMISSARY SAVINGS RATE
9.8%	X	23%	=	2.25%

TABLE 4-5. ARI Average Net Savings Rate.

TOTAL FOOD EXPENDITURE RATE		AVERAGE AT HOME EXPENDITURE RATE		NET AT HOME FOOD EXPENDITURE RATE
21.56%	X	68.10%	=	14.68%
NET AT HOME FOOD EXPENDITURE RATE		FOOD AT HOME AVERAGE COMMISSARY EXPENDITURE RATE		NET COMMISSARY EXPENDITURE RATE
14.68%	X	80%	=	11.74%
NET COMMISSARY EXPENDITURE RATE		AVERAGE COMMISSARY SAVINGS RATE		CURRENT AVERAGE NET SAVINGS RATE
11.74%	X	20%	=	2.35%

TABLE 4-6. Current Estimated Average Net Savings Rate.

PAY GRADE	E-5
AVERAGE ANNUAL GROSS INCOME	\$24,932.40
AVERAGE ANNUAL TOTAL FOOD EXPENDITURES (\$25,284 X 21.56%)	\$5,375.43
AVERAGE ANNUAL AT HOME FOOD EXPENDITURES (\$25,284 X 14.68%)	\$789.11
AVERAGE ANNUAL COMMISSARY FOOD EXPENDITURES (\$25,284 X 11.74%)	\$2,927.06
AVERAGE ANNUAL COMMISSARY SAVINGS (\$25,284 X 2.35%)	\$585.91

TABLE 4-7. Commissary Savings Example.

PAY GRADE	AVERAGE MONTHLY GROSS INCOME	COMMISSARY EXPENDITURES	COMMISSARY SAVINGS
E-1	\$1,356.90	\$159.30	\$31.89
E-2	\$1,457.40	\$171.10	\$34.25
E-3	\$1,583.70	\$185.93	\$37.22
E-4	\$1,761.00	\$206.74	\$41.38
E-5	\$2,077.70	\$243.92	\$48.83
E-6	\$2,333.90	\$274.00	\$54.85
E-7	\$2,637.00	\$309.58	\$61.97
E-8	\$3,068.00	\$360.18	\$72.10
E-9	\$3,706.70	\$435.17	\$87.11

TABLE 4-8. Enlisted Average Monthly Savings.

PAY GRADE	AVERAGE MONTHLY GROSS INCOME	COMMISSARY EXPENDITURES	COMMISSARY SAVINGS
W-1	\$2,633.81	\$309.21	\$61.89
W-2	\$2,971.76	\$348.88	\$69.84
W-3	\$3,363.11	\$394.83	\$79.03
W-4	\$3,990.11	\$468.44	\$93.77
W-5	\$4,538.51	\$532.82	\$106.66

TABLE 4-9. Warrant Officer Average Monthly Savings.

PAY GRADE	AVERAGE MONTHLY GROSS INCOME	COMMISSARY EXPENDITURES	COMMISSARY SAVINGS
O-1	\$2,171.66	\$254.95	\$51.03
O-2	\$2,836.76	\$333.04	\$66.66
O-3	\$3,621.36	\$425.15	\$85.10
O-4	\$4,354.46	\$511.21	\$102.33
O-5	\$5,332.06	\$625.98	\$125.30
O-6	\$6,519.16	\$765.35	\$153.20
O-7	\$7,652.66	\$898.42	\$179.84

TABLE 4-10. Officer Average Monthly Savings.

The difficulty involved with measuring commissary benefits should be apparent by now. As was demonstrated in Table 4-1 the benefit's value measured from the employer's perspective, is \$66.67 per member. From a actual market perspective the benefit ranges according to income level with the officer's enjoying the greatest benefit.

According to Table 4-8 if the government decided to eliminate taxpayer support for the commissary system and make direct cash payments at \$66.67 per member per month, pay grades E-1 through E-7, W-1 and O-1 to O-2 would be satisfied. If the \$66.67 per month was added to the existing monthly BAS rates, then enlisted and officer personnel would receive annually over \$3,100 and \$2,500 respectively. The annual national average food budget for single consumers is \$2,517. Assuming the government had an obligation to feed only the service member and not dependents, enlisted personnel would receive annually about \$600 more the national average. However, if given a choice some members might elect to receive less than \$66.67 per month in exchange for the freedom to shop at local commercial stores.

E. PROGRAM FEASIBILITY

One argument often cited to justify commissaries is the need to adjust for low military pay. The cost savings provided by commissaries helps extend the purchasing power of the BAS. Therefore, if direct cash payment is more efficient than commissaries then it would make sense to just add the commuted payment onto the existing subsistence allowance. All officers receive BAS but not all enlisted personnel receive the allowance. Commuted payments would be reduced for those enlisted personnel who receive subsistence in-kind and do not draw BAS. This means that the estimated total enlisted costs for direct cash payments will have to be reduced to account for this occurrence. Table 4-11 calculates a percentage estimate for enlisted personnel drawing BAS.

The estimated enlisted monthly commissary savings calculated by Table 4-8 are used in Table 4-12 to compute estimated enlisted force total monthly direct cash payment costs. The projected FY95 manning levels used in Table 4-12 were developed through regression analysis of actual total force manning levels for fiscal years 1989 through 1993.[Ref. 55] The same method was used to compute the FY95 projected manning levels in Tables 4-13 and 4-14.

1991 ENLISTED FORCE MARRIED RATE	56.28%	
1992 ENLISTED FORCE MARRIED RATE	58.18%	
1993 ENLISTED FORCE MARRIED RATE	54.57%	
ENLISTED FORCE AVERAGE MARITAL RATE		56.34%
ENLISTED FORCE AVERAGE SINGLE RATE (100% - 56.34%)	44.66%	
AVERAGE SINGLE OFF-BASE HOUSING RATE (SOURCE:1992 SEVENTH QPMC REPORT)	24.00%	
AVERAGE SINGLE ENLISTED DRAWING BAS		10.72%
ENLISTED FORCE DRAWING BAS		67.06%

TABLE 4-11. Enlisted Force Percentage Drawing BAS.

PAY GRADE	COMMISSARY SAVINGS	PROJECTED FY95 MANNING LEVELS	DIRECT PAYMENT COSTS (ROUNDED TO NEAREST DOLLAR)
E-1	\$31.89	49,609	\$1,582,031
E-2	\$34.25	88,436	\$3,028,933
E-3	\$37.22	182,135	\$6,779,065
E-4	\$41.38	307,406	\$12,720,460
E-5	\$48.83	257,107	\$12,554,535
E-6	\$54.85	203,199	\$11,145,465
E-7	\$61.97	122,278	\$7,577,568
E-8	\$72.10	28,438	\$2,050,380
E-9	\$87.11	11,656	\$1,015,354
	TOTAL	1,250,359	\$58,453,791
	ENLISTED FORCE DRAWING BAS		X 67.06%
	TOTAL COSTS		\$39,199,112

TABLE 4-12. Estimated Enlisted Total Monthly Costs.

PAY GRADE	COMMISSARY SAVINGS	PROJECTED FY95 MANNING LEVELS	DIRECT PAYMENT COSTS (ROUNDED TO NEAREST DOLLAR)
W-1	\$61.89	1,729	\$107,008
W-2	\$69.84	7,726	\$539,584
W-3	\$79.03	5,121	\$404,713
W-4	\$93.77	2,252	\$211,170
W-5	\$106.66	105	\$11,199
		TOTAL	\$1,273,674

TABLE 4-13. Estimated Warrant Officer Total Monthly Costs.

PAY GRADE	COMMISSARY SAVINGS	PROJECTED FY95 MANNING LEVELS	DIRECT PAYMENT COSTS (ROUNDED TO NEAREST DOLLAR)
O-1	\$51.03	19,798	\$1,010,292
O-2	\$66.66	24,709	\$1,647,102
O-3	\$85.10	88,835	\$7,559,859
O-4	\$102.33	45,909	\$4,697,868
O-5	\$125.30	28,536	\$3,575,561
O-6	\$153.20	11,993	\$1,837,328
O-7	\$179.84	448	\$80,568
O-8	\$179.84	310	\$55,750
O-9	\$179.84	110	\$19,782
O-10	\$179.84	36	\$6,474
		TOTAL COSTS	\$20,490,584

TABLE 4-14. Estimated Officer Total Monthly Costs.

The estimated total costs calculated in Tables 4-12, 4-13, and 4-14 are summed in Table 4-15 to estimate total annual direct payment costs. Total annual direct payment program costs were subtracted from the FY95 appropriated funds to determine total annual direct cash payment savings in Table 4-16. Realizing that only CONUS activities should be considered at this time, Table 4-17 computes the annual estimated cost savings for CONUS direct cash payments. The \$90 million plus in annual cost savings does not include indirect cost savings from other agencies such as the Defense Personnel Support Center (DPSC). According to the Jones Commission report, DPSC CONUS commissary support costs were estimated to be approximately \$35 million in FY88. Indexing for inflation could produce annual cost savings in excess of \$130 million making direct cash payments more efficient than the commissary system.

ENLISTED MONTHLY COSTS	\$39,199,112	
WARRANT OFFICER MONTHLY COSTS	\$1,273,674	
OFFICER MONTHLY COSTS	\$20,490,584	
TOTAL MONTHLY DIRECT PAYMENT COSTS		\$60,963,370
		X 12 months
TOTAL ANNUAL DIRECT PAYMENT COSTS		\$731,560,440

TABLE 4-15. Total Annual Direct Payment Costs. (CONUS and Overseas)

TOTAL FY95 APPROPRIATED FUNDS	\$1,200,000,000
LESS ANNUAL DIRECT PAYMENT COSTS	- \$731,560,440
TOTAL ANNUAL DIRECT PAYMENT SAVINGS	\$468,439,560

TABLE 4-16. Total Annual Direct Payment Savings. (CONUS and Overseas)

ANNUAL DIRECT PAYMENT COSTS	\$731,560,440
AVERAGE CONUS FORCE	X 66.47%
ESTIMATED CONUS DIRECT PAYMENTS	\$486,268,224
TOTAL FY95 APPROPRIATED FUNDS	\$1,200,000,000
AVERAGE CONUS FUNDS RATE	x 48.03%
FY95 ESTIMATED CONUS FUNDS	\$576,360,000
FY95 ESTIMATED CONUS FUNDS	\$576,360,000
ESTIMATED CONUS DIRECT PAYMENTS	\$486,268,222
ESTIMATED ANNUAL CONUS SAVINGS	\$90,091,778

TABLE 4-17. Annual CONUS Direct Payment Savings.

This chapter presented data to analyze the nature of the commissary benefit. A discussion was presented to address the second thesis question concerning the legal right to commissary benefits. It was determined that beneficiaries have no legal claim to these benefits. The third thesis question was answered pertaining to the value of the

commissary benefit. This chapter also provided an analysis to answer the last thesis question and determine if direct cash payment was a feasible alternative to replace the commissary system. Although many military spouses contend that the enlisted \$204.00 and officer \$142.46 BAS rates are inadequate to feed a family, the fact remains that the government is obligated to feed only active duty members and not their dependents. If military family pay is inadequate then the overall compensation package needs to be increased without discrimination to bachelors. The next chapter will present a summary and provide conclusions. It will also provide program recommendations and suggestions for further research.

V. SUMMARY

A. OVERVIEW

This thesis analyzed the feasibility of direct cash payments in lieu of commissary privileges for CONUS based active duty personnel. This study presented a history of the commissary system depicting a form of subsistence support that evolved into a means for increasing family incomes that further widens the dependent pay differential. From the history presented in Chapter II it can be ascertained that the commissary system was originally envisioned to support troops stationed on the western frontier. However, due to the Army's cavalier attitude in liberally interpreting the law, the commissary system eventually expanded to all posts including non-frontier and metropolitan locations. In the early twentieth century the commissary system spread to the other services. By the time congress took steps to curtail its growth after World War II, the system had grown to become a major food chain within the United States.

Many studies were conducted over the last thirty years trying to justify the necessity for commissaries. Many of the studies produced varied conclusions. The two main studies, both the Bowers Commission and Jones Commission reports, concentrated on improving the commissary system in order to produce efficiencies that would secure the system's viability. Both the 1969 Logistics Management Institute study and the 1967 First QRMC determined that government subsidies should be discontinued for both exchanges and commissaries. The First QRMC determined that commissaries and exchanges should no longer be considered as elements of compensation when determining military pay raises. One reason for not considering these privileges as normal compensatory benefits was the questionable obligation that could be placed on the government. This questionable obligation stems from

beneficiaries not being accessible to these facilities, i.e. members serving on recruiting duty with no nearby commissary. These members might then expect to receive a cash payment for not receiving their commissary benefits. This situation has also become a reality for many retirees due to the military downsizing and the current ordered closing of 67 military bases.

Another reason was due to the inconsistency that they present between military and civil service salaries. Since military pay levels were linked to General Schedule Federal employee salaries, which were comparable to private sector salaries, the First QRMC concluded that the commissary and exchange systems should no longer receive Government subsidies. This was based on maintaining pay parity between Federal civilian employees and the military. The study also concluded that Government subsidized commissaries create an increased income effect that is discriminatory to single members. The pay distinctions created by the savings are unequally accrued to various members. The member's value of these privileges depends on income level, family size, family consumption patterns, and availability and access to the facilities.

B. CONCLUSIONS

Threats from the private sector grocery industry and from Pentagon budgeteers will continue to plague the commissary system. Future Defense budget reductions will induce further pressure to find efficiencies within current program funding. Along with other support programs the commissary system will have to become leaner through consolidation of existing operations. This consolidation will be in addition to current base closure initiatives. The total effect will reduce the number of commissary patrons which will lead to reduced surcharge revenues. Reduced surcharge revenues will prevent

the commissary system from enacting facility modernization plans due to current fixed costs. To correct this situation will require increased appropriated fund support or higher surcharge rates. Higher surcharge rates will in turn reduce customer patronage which will further amplify funding shortfalls.

The Pentagon has responded to this situation by expanding commissary privileges to reserve personnel. Reserve personnel were granted commissary privileges to 12 times per year. Currently, the Pentagon is considering an increase in frequency of reserve privileges to 48 times per year. But this is only a short term solution to reverse decreasing commissary sales. Sales will continue to constrict due to base closures and the reduction in active duty personnel by another 100,000 to a final total force of 1.4 million.

The current value of the commissary privilege will continue to erode either through inaccessibility or higher surcharges. The analysis presented in Chapter IV clearly demonstrates that the third privatization alternative of direct cash payment in lieu of commissary privileges is a viable alternative. The savings could be apportioned in such a manner as to also provide some compensation for retired personnel should this be considered necessary.

Another threat that may eventually surface is the dependent pay differential that is inherent in the military compensation system. In developing basic principles for military compensation the Seventh QPMC determined that any pay differential based on other than status, skill or location is incorrect and discriminatory. Subsidized commissaries just add to this discriminatory practice. This could in turn create added pressure to end government subsidies for commissaries.

And finally, it can be concluded that direct cash payments are more efficient than commissary privileges. The

savings derived from such a program could exceed \$130 million per year. The savings could also be used to balance the pay differential between officer and enlisted BAS rates.

C. RECOMMENDATIONS

1. Commissary Subsidies Should be Discontinued.

All taxpayer support for commissaries should be discontinued. Commissaries should not necessarily be eliminated but should simply become self-sufficient. Those stores that are considered to be a necessary convenience can continue to operate as part of the base exchange system. This would then make them similar to existing on-base convenience stores.

2. BAS Rates Should be Equal for Officers and Enlisted.

The Government does have an obligation to feed active duty service personnel. The obligation to feed military troops should be equal to all service members including officers. Currently, enlisted members receive approximately \$60.00 per month more in BAS than do officers. This difference is due to enlisted BAS rates being linked to increases in mess hall daily food allowances and officer BAS rates being linked to annual pay raises. Cost savings from discontinued subsidies should be used to correct this inequity.

3. BAS Should Match Single Consumer Expenditure Rates.

The Government does not have an obligation to feed families. Levels of BAS should be comparable to the national average Consumer Food Expenditure rates for single individuals published by the Census Bureau. If military income levels are considered inadequate to provide a normal standard of living for families based on national averages then income levels should be increased accordingly. The military compensation system should not discriminate against bachelors by providing additional income to families.

4. Cash Payments in Lieu of Commissary Privileges.

Although the Government does not have any obligation to make cash payments in lieu of commissary privileges it might do so for two reasons. First, it should be used to equalize officer and enlisted BAS rates. And second, it should be used to provide BAS increases in order to offset some of the lost income. This would be needed in order to maintain the existing "quality of life" standard. The best time to implement would be during the annual January pay raise. This would make the change less dramatic.

D. **AREAS FOR FURTHER RESEARCH**

Other areas suitable for future research are the effects of the dependent pay differential and in-kind compensation practices. The dependent pay differential might encourage service members to marry sooner than they would normally. This practice of members marrying sooner to receive additional pay benefits eventually leads to household growth that might be faster than national averages. This in turn could cause more problems for the Pentagon due to increased demand for housing, child care facilities and other family service support. Although "needs based" compensation would appear to be less costly to the Government, it may eventually lead to overall increased costs.

Another area that might be suitable for future research is the practice of in-kind compensation. This practice was a normal business practice in the first half of the century but is now an archaic practice within CONUS. The military contends that young men and women are not ready to live on their own and must be fed and housed on military bases. This practice allows the military to be visualized as a caring employer. The military also cites that from a training perspective both camaraderie and teamwork are developed and reinforced from troops living and eating together. But these

attributes seem to be just as important to the private sector as the military. The answer might be found by studying how the private sector develops these characteristics. Since the draft is gone and military service is an occupation similar to others in the private sector, perhaps in-kind compensation may act more as a deterrence to military service and should be discontinued. If the military is going to compete with the private sector for future labor, then perhaps its compensation should be more in line with the private sector.

LIST OF REFERENCES

1. Nuskey, Sharon, "Privatization," Global Business White Papers, no.5, pp.3-7, The Conference Board, July 1992.
2. De Alessi, Louis, "Property Rights and Privatization," Prospects for Privatization, pp.24-25, Proceedings of The Academy of Political Science, v.36, no.3, New York, New York, 1987.
3. President's Commission on Privatization, PRIVATIZATION: Toward More Effective Government, pp.1-2, Report of the President's Commission on Privatization, Government Printing Office, Washington, D.C., March, 1988.
4. Ibid. p.144.
5. Department of Defense, Office of the Assistant Secretary of Defense (Force Management and Personnel, THE JONES COMMISSION - DOD Study of the Military Commissary System, vol. I, pp. 5-24 to 5-25, December 18, 1989.
6. "New Plan Would Jack Up Commissary Surcharge," Navy Times, 27 June 1994.
7. "FAST TRACK, Quick Updates on the Major Issues, New World Order, The incredibly shrinking military," Navy Times, 27 June 1994.
8. Department of Defense, Office of the Assistant Secretary of Defense (Force Management and Personnel, Report of the Seventh Quadrennial Review of Military Compensation, Major Topical Summary (MTS) One, "Compensation Structure," Appendix B, p. 1-11, Washington, August 1992.
9. Office of The Secretary of Defense, Program Budget Decision Number 282, pp. 1-3, December 19, 1974.
10. Office of the Assistant Secretary of Defense (Force Management and Personnel), Report of the Seventh Quadrennial Review of Military Compensation, pp. 61-63, Washington, D.C., 21 August 1992.
11. Dearing, Jeffery, Lynn, An Evaluation of the Perceived and Actual Cost Comparisons of Commissaries: Fort Ord Case, p. 12, Master's Thesis, Naval Postgraduate School, Monterey, California, September 1984.

12. Risch, Erna, Quartermaster Support of the Army: A History of the Corps 1775 - 1939, pp. 1 - 29, U.S. Government Printing Office, Washington, D.C., 1962.
13. Defense Commissary Agency, 1993-1994 DECA FACT BOOK: A Reference Guide to the Defense Commissary Agency, Vol. II, p. 10, Downey Communications, Inc., 1994.
14. Kaufman, Brian T., McLaughlin, Robert G., and Rowlison, Raymond L., Real Income Facts Today: A Review of the Military Compensation System, p. 25, Research Study, Air Command and Staff College, Air University, Maxwell Air Force Base, Alabama, May 1975.
15. Ibid.
16. Risch, Erna, Quartermaster Support of the Army: A History of the Corps 1775 - 1939, pp. 1 - 29, U.S. Government Printing Office, 1962.
17. Boyd, George E., What is the Value of the Commissary Privilege?: A Case Study at Wright-Patterson Air Force Base, pp. 2-7, Master's Thesis, Air Force Institute of Technology, Air University, Wright-Patterson Air Force Base, Ohio, December 1977.
18. Office of the Assistant Secretary of Defense (Force Management and Personnel), Report of the Seventh Quadrennial Review of Military Compensation, p. 24, Washington, D.C., 21 August 1992.
19. Office of the Assistant Secretary of Defense (Force Management and Personnel), Report of the Seventh Quadrennial Review of Military Compensation, p. 16, Washington, D.C., 21 August 1992.
20. Office of the Deputy Assistant Secretary of Defense (Manpower and Personnel Policy), The Jones Commission - A Department of Defense Study of the Military Commissary System, Vol. I, p. 2-2, December 18, 1989.
21. Boyd, George E., What is the Value of the Commissary Privilege?: A Case Study at Wright-Patterson Air Force Base, pp. 2-7, Master's Thesis, Air Force Institute of Technology, Air University, Wright-Patterson Air Force Base, Ohio, December 1977.
22. Ibid.

23. Office of the Deputy Assistant Secretary of Defense (Manpower and Personnel Policy), The Jones Commission - A Department of Defense Study of the Military Commissary System, Vol. I, p. 2-3, December 18, 1989.
24. Ibid. p. 2-4.
25. Boyd, George E., What is the Value of the Commissary Privilege?: A Case Study at Wright-Patterson Air Force Base, pp. 2-7, Master's Thesis, Air Force Institute of Technology, Air University, Wright-Patterson Air Force Base, Ohio, December 1977.
26. Defense Commissary Agency, 1993-1994 DECA FACT BOOK: A Reference Guide to the Defense Commissary Agency, Vol. II, p. 11, Downey Communications, Inc., 1994.
27. Office of the Deputy Assistant Secretary of Defense (Manpower and Personnel Policy), The Jones Commission - A Department of Defense Study of the Military Commissary System, Vol. I, p. 2-3, December 18, 1989.
28. Ibid. p. 5-24.
29. Office of the Assistant Secretary of Defense (Force Management and Personnel), Report of the Seventh Quadrennial Review of Military Compensation, p. 3-2, Washington, D.C., 21 August 1992.
30. General Accounting Office, Report to the Congress, Military Commissaries: Justification As Fringe Benefit, p. 2, Document FPCD-80-1, January 1980.
31. Ibid. Appendix II, p. 10.
32. Dearing, Jeffery, Lynn, An Evaluation of the Perceived and Actual Cost Comparisons of Commissaries: Fort Ord Case, p. 20, Master's Thesis, Naval Postgraduate School, Monterey, California, September 1984.
33. Office of the Deputy Assistant Secretary of Defense (Manpower and Personnel Policy), The Jones Commission - A Department of Defense Study of the Military Commissary System, Vol. I, p. 2-3, December 18, 1989.
34. General Accounting Office, Report to the Congress, Military Commissaries: Justification As Fringe Benefit, Appendix II, p. 7-9, Document FPCD-80-1, January 1980.
35. Ibid. p. 2., Appendix II, pp. 10-11.

36. Dearing, Jeffery, Lynn, An Evaluation of the Perceived and Actual Cost Comparisons of Commissaries: Fort Ord Case, p. 21, Master's Thesis, Naval Postgraduate School, Monterey, California, September 1984.
37. Crews, Donald A., Protecting the Commissary Benefit When Self-Sufficiency is Implemented, pp. 1-5, Research Study, Air Command and Staff College, Air University, Maxwell Air force Base, Alabama, May 1976.
38. Ibid. p. 9.
39. General Accounting Office, Report to the Congress, Military Commissaries: Justification As Fringe Benefit, Appendix I, p. 1, Document FPCD-80-1, January 1980.
40. Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs), Study of Military Commissary Stores, Vol. I, Chapter 1, p. 1-8, Washington, D.C., May 1975.
41. Crews, Donald, A., Protecting the Commissary Benefit When Self-Sufficiency is Implemented, p. 1-11, Research Study, Air Command and Staff College, Air University, Maxwell Air Force Base, Alabama, May 1976.
42. General Accounting Office, Report to the Congress, Military Commissaries: Justification As Fringe Benefit, p. 4-6, January 1980.
43. President's Commission on Privatization, PRIVATIZATION: Toward More Effective Government, pp. 144, Report of the President's Commission on Privatization, Government Printing Office, Washington, DC, March, 1988.
44. Defense Commissary Agency, 1993-1994 DECA FACT BOOK: A Reference Guide to the Defense Commissary Agency, Vol. II, p. 61-63, Downey Communications, Inc., 1994.
45. Ostroff, Jim, "Competing to Survive: The Houdini Factor," Interservice, The Journal of the American Logistics Association, Fall 1993.
46. "New Plan Would Jack up Commissary Surcharge," Navy Times, 27 June 1994.
47. "The List is Out: Large Stores Beware," Navy Times, 4 July 1994.

48. Office of the Assistant Secretary of Defense (Force Management and Personnel), Armed Services Commissary Store Regulations, DOD Directive 1330.17, Washington, D.C., 29 October 1987.

49. Defense Commissary Agency, Fact Sheet, Office of Public Affairs, Fort Lee, Virginia, 1993-1994 Edition.

50. This is a generally accepted estimate used by DOD's Office of Program Analysis and Evaluation.

51. U.S. Army Institute for the Behavioral and Social Sciences, ARI Technical Report 619, Military and Civilian Lifetime Earnings Comparisons, by Charles Dale, Army Research Institute and Lawrence G. Hill, Argonne National Laboratory, p. 3, February 1984.

52. Office of the Assistant Secretary of Defense (Manpower, Installations and Logistics), Report of the Fifth Quadrennial Review of Military Compensation, Volume I, Uniformed Services Retirement System, Washington, D.C., January 1984.

53. U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, Statistical Abstract of the United States 1993, Washington, D.C., 1993.

54. U.S. Army Institute for the Behavioral and Social Sciences, ARI Technical Report 619, Military and Civilian Lifetime Earnings Comparisons, by Charles Dale, Army Research Institute and Lawrence G. Hill, Argonne National Laboratory, p. 3, February 1984.

55. Department of Defense Directorate for Information Operations and Reports (DIOR), Selected Manpower Statistics, Fiscal Years 1989 through 1993, Washington, D.C.

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